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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,978	09/22/2006	Hayato Yoshino	1018773-000046	3260
21839 7590 03/19/2010 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER DESAI, NAISHADH N	
			ART UNIT 2834	PAPER NUMBER
			NOTIFICATION DATE 03/19/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/593,978	Applicant(s) YOSHINO ET AL.	
	Examiner NAISHADH N. DESAI	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02/17/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landgraf (US 4322665) in view of Pengov (US 6046568) and further in view of Masumoto et al (US 6858964).

2. Regarding claim 8, Landgraf teaches:

A single-phase motor comprising (abstract):

a stator including a stator iron core formed by laminating a plurality of electromagnetic steel sheets and provided with a slot between each of a plurality of stator teeth (Col 3 ll 46-50 and Fig 2), and

single-phase two-pole distributed windings composed of a main winding and an auxiliary winding contained in the slot (abstract and Col 3 ll 57-65);

a rotor placed through a gap on an inner circumference of the stator (Col 3 ll 46-57), and

a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core (re-illustration below of Fig 2,5, dotted lines appears to teach a plurality of semicircular notches, however perhaps not inherently uniformly distributed or evenly spaced).

Landgraf does not literally teach that that there are “a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core wherein the number of semicircular notches corresponds to the number of stator teeth”.

Pengov teaches the use of “a plurality of evenly spaced semicircular notches (Fig 3 in close proximity to element 12) and each provided at an outer side of each of the plurality of stator teeth (Fig 3,18A-H) on an outer circumference of the stator iron core (Fig 3,12)”.

Pengov does not teach the notches “having an approximately same width as the stator teeth”.

Masumoto et al teaches a stator core (Fig 4,7) with notches (Fig 4,11) “having an approximately same width (Fig 4,T) as the stator teeth (Fig 4,3f)”.

It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Landgraf with the teachings of Pengov and Masumoto et al to make a stator core having “a plurality of evenly spaced semicircular notches having an approximately same width as the stator teeth and each provided at an outer side of each of the plurality of stator teeth on an outer circumference of the stator iron core wherein the number of semicircular notches corresponds to the number of stator teeth”. The motivation to do so would be that it would provide a motor having improved torque, reduced torque ripple (Col 4 ll 54-63 of

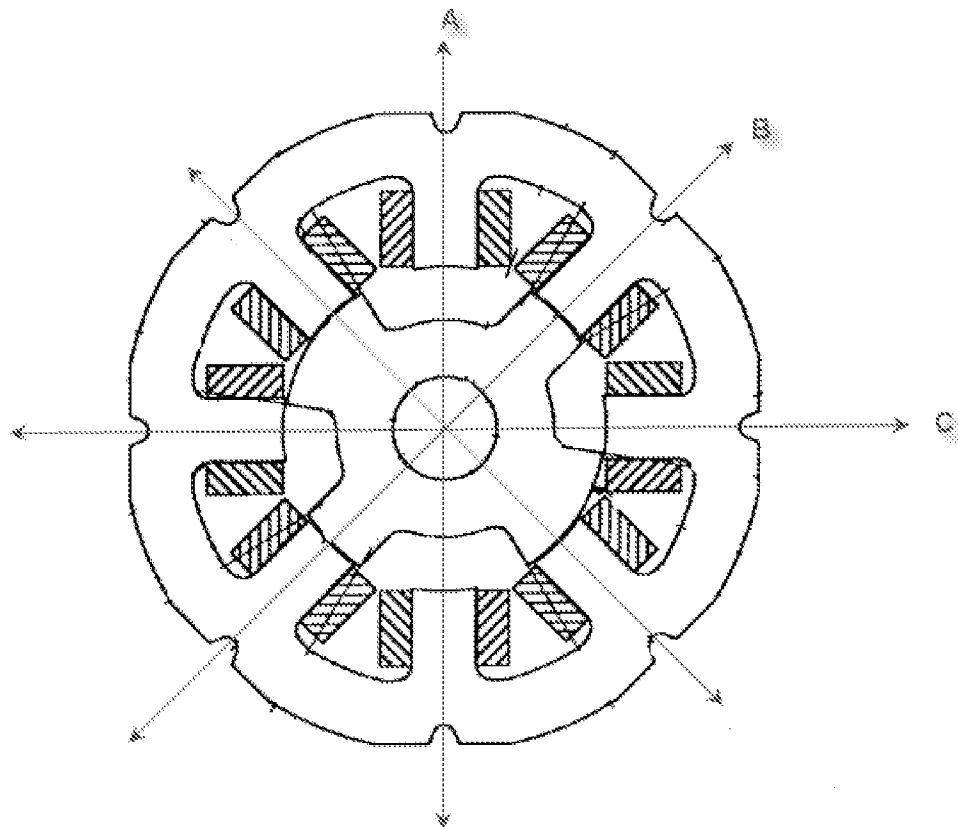
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Pengov) and improve efficiency, reduce vibrations or noise of the motor (Col 3 II 46-47, Col 8 III 66-67, Col 9 II 1-5 of Masumoto et al).

3. Regarding claim 9, Landgraf (Col 5 line 20 and Col 6 II 42-45) teaches a hermetic compressor comprising the single-phase motor of claim 8.

4. Regarding claim 10, Landgraf does not teach that each semicircular notch is aligned with a respective stator tooth so that their centers are substantially located on the same radial axis. Pengov teaches that each semicircular notch (Fig 3) is aligned with a respective stator tooth (Fig 4, 18A-H also) so that their centers are substantially located on the same radial axis (re-illustration of Fig 4, labels A-C below). It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Landgraf with the teachings of Pengov to make each semicircular notch is aligned with a respective stator tooth so that their centers are substantially located on the same radial axis. The motivation to do so would be that it would provide a motor having improved torque, reduced torque ripple (Col 4 II 54-63 of Pengov).

FIG. 4
45 DEGREES



5. Regarding claim 11, Landgraf does not teach that in the assembled state of the single phase motor, each of the plurality of evenly spaced semicircular notches form a flow passage. Masumoto et al (Col 11 ll 18-20) teaches that in the assembled state of the single phase motor, each of the plurality of evenly spaced semicircular notches form a flow passage. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Landgraf with the teachings

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of Masumoto et al to make an apparatus wherein the assembled state of the single phase motor, each of the plurality of evenly spaced semicircular notches form a flow passage. The motivation to do so would be that it would ease assemblage of the motor, provide a passage for cooling gas or lubricating oil (Col 11 ll 10-23 of Masumoto et al).

Response to Arguments

6. Applicant's arguments, filed 12/28/2009, with respect to the rejection(s) of claim(s) 8-11 under USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Pengov (US 6046568) and further in view of Masumoto et al (US 6858964)

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 for details.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAISHADH N. DESAI whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NND

/Karl Tamai/

Primary Patent Examiner AU 2834